

XV. Oceanography- Government

Section XV of the Modifications of Activities Planned for 2003-2004 presents final information regarding United States Antarctic Program sponsored oceanographic expeditions during the 2003-2004 season.

Note: For actual tracks of the Research Vessels *Nathaniel B. Palmer* and *Laurence M. Gould* please see Attachment C, Cruise Tracks.

R/V Nathaniel B. Palmer

The *R/V Nathaniel B. Palmer* made ten science cruises during the period of 30 March 2003 through 31 March 2004. Cruises are:

Cruise NBP03-04

23 May – 11 June 2003 Northbound transit to Alaska

Late Cretaceous and Cenozoic Reconstructions of the Southwest Pacific

GO-071-O (Steve Cande/Joann Stock)

Cruise NBP03-04A

05 July – 18 August 2003 Arctic Cruise

Western Arctic Shelf-Basin Interaction

O-287-N 7 (Jim Swift)

Cruise NBP03-04B

22 August – 08 September 2003 Southbound Transit to HI

Late Cretaceous and Cenozoic Reconstructions of the Southwest Pacific

GO-071-O (Steve Cande/Joann Stock)

Production Observation Through Another Translatitudinal Oceanic Expedition (POTATOE)

B-200-N (Wade Jeffrey)

Cruise NBP03-04C

14 September – 08 October 2003

Late Cretaceous and Cenozoic Reconstructions of the Southwest Pacific

GO-071-O (Steve Cande/Joann Stock)

Production Observation Through Another Translatitudinal Oceanic Expedition (POTATOE)

B-200-N (Wade Jeffrey)

Cruise NBP03-04D

09 October – 14 October 2003

Late Cretaceous and Cenozoic Reconstructions of the Southwest Pacific

GO-071-O (Steve Cande/Joann Stock)

Production Observation Through Another Translatitudinal Oceanic Expedition (POTATOE)

B-200-N (Wade Jeffrey)

Cruise NBP03-05

27 October – 19 November 2003 (Aborted due to major engine failures on 03 November)

Interactive Effects of UV Radiation and Vertical Mixing on Phytoplankton and Bacterioplankton in the Ross Sea

B-203-N (Pat Neale)

23 November – 12 December 2003

Vessel off hire for main engine repairs

Cruise NBP03-05A

18 December 2003 – 01 January 2004

Interannual Variability in the Antarctic-Ross Sea (IVARS): Nutrients and Seasonal Production

B-047-N (Walker Smith)

Cruise NBP03-06

05 January – 17 January 2004

Collaborative Research: Antarctic Cretaceous-Cenozoic Climate, Glaciation, and Tectonics: Site surveys for drilling from the edge of the Ross Ice Shelf

GO-152-N (Lou Bartek/Bruce Luyendyk)

Cruise NBP04-01

19 January – 18 February 2004

Neotectonic Structure of Terror Rift, Western Ross Sea

G-099-N (Larry Lawver/Terry Wilson)

Cruise NBP04-02

23 February – 10 April 2004

ANSLOPE III Collaborative Research: *Cross-Slope Exchanges at the Antarctic Slope Front*

O-215-N (Arnold Gordon)

Biology & Medicine

Principal Investigator	Event	Institution
Jeffrey	B-200-N	University of West Florida
Neal	B-203-N	Smithsonian Institution

Oceans and Climate

Principal Investigator	Event	Institution
Swift	O-287-N	Scripps Institution of Oceanography.
Gordon	O-215-N	Columbia University, LDEO

Geology & Geophysics

Principal Investigator	Event	Institution
Stock	G-071-0	California Institute of Technology
Luyendyk	G-152-N	University of California, Santa Barbara
Wilson	G-099-N	Ohio State University

R/V Laurence M. Gould

The R/V *Laurence M. Gould* made twelve science cruises and passenger transports to the Antarctic Peninsula during the period of 31 March 2003 through 1 April 2004.

Cruise LMG03-04

05 April – 07 May 2003

Structure, function and expression of tubulins, globins, and microtubule-dependent motors from cold-adapted Antarctic fishes

B-037-L (Bill Detrich)

Cold body temperature as an evolutionary shaping force in the physiology of Antarctic fishes

B-036-L (Bruce Sidell)

CTD operations and mooring recovery

Science of Opportunity (Martin Visbeck)

Cruise LMG03-04A

10 May- 05 June 2003

Structure, function and expression of tubulins, globins, and microtubule-dependent motors from cold-adapted Antarctic fishes

B-037-L (Bill Detrich)

Cold body temperature as an evolutionary shaping force in the physiology of Antarctic fishes

B-036-L (Bruce Sidell)

Cruise LMG03-05

16 June - 28 June 2003

Palmer Station Shuttle

29 June – 15 August 2003

Maintenance Period at Punta Arenas, Chile

Cruise LMG03-05A

16 August – 03 September 2003

Palmer Station Shuttle

*Advanced Microwave Scanning Radiometer (AMSR) Sea Ice Validation during the L.M.
GOULD Traverse to Antarctica*

O-309-L (Konrad Steffen)

Open Period for Maintenance

07 – 20 September 2003

Cruise LMG03-06

22 September – 05 October 2003

Palmer Station Shuttle

Cruise LMG03-07

10 October - 23 October 2003

Palmer Station Shuttle, COPA Field Camp put-in

Cruise LMG03-07A

23 October - 06 November 2003

Open Period

Cruise LMG03-08

07 November – 19 November 2003

Dynamic Similarity or Size Proportionality: Adaptations of a Polar Copepod

B-285-L (Jeanette Yen)

Long-Term Data Collection at Select Antarctic Peninsula Visitor Sites

B-086-E (Ronald Naveen)

Cruise LMG03-09

23 November – 29 December 2003

Global Climate Change and the Evolutionary Ecology of Antarctic Mollusks in the Late Eocene

G-065-E (Daniel Blake)

Evolution and Biogeography of Late Cretaceous Vertebrates from the James Ross Basin, Antarctic Peninsula

G-061-E (Judd Case)

Dynamics of Predator-Prey Behavior in the Antarctic Ocean

B-023-L (Richard Veit)

Cruise LMG04-01

12 February – 24 March 2004

Long-Term Ecological Research on the Antarctic Marine Ecosystem: An Ice-Dominated Environment (LTER)

BP-013-O (Bill Fraser)

BP-016-O (Maria Vernet)

BP-021-O (Doug Martinson)

BP-028-O (Langdon Quetin, Robin Ross)

BP-032-O (Ray Smith)

BP-045-O (Hugh Ducklow)

Cruise LMG04-02

12 February - 24 March 2004

Plankton community structure and iron distribution in the southern Drake Passage

B-228-L (Greg Mitchell)

B-248-L (Meng Zhou)

B-225-L (Christopher Measures)

Cruise LMG04-03

28 March – 12 April 2004

Mysticete whale acoustic census in the GLOBEC west Antarctic project area

B-239-L (John Hildebrand)

Biology & Medicine

Principal Investigator	I.D. No.	Institution
Detrich	B-037-L	Northeastern University
Siddell	B-036-L	University of Maine
Yen	B-285-E/L	Georgia Institute of Technology
Naveen	B-086-E	Oceanites Inc., Chevy Chase, Maryland
Veit	B-023-L	City University of New York
Fraser	B-013-L/P	Polar Oceans Research Group
Vernet	B-016-L/P	Scripps Institution of Oceanography
Martinson	B-021-L	Columbia University, LDEO
Quetin/Ross	B-028-L/P	University of California, Santa Barbara
Smith	B-032-L/P	University of California, Santa Barbara
Ducklow	B-045-L/P	VIMS, The College of William and Mary
Mitchell	B-228-L	University of Hawaii, Manoa
Zhou	B-248-L	University of Massachusetts
Measures	B-225-L	University of Hawaii, Manoa
Hildebrand	B-239-L	Scripps Institution of Oceanography

Geology and Geophysics

Principal Investigator	I.D. No.	Institution
Blake	G-065-E	University of Illinois, Urbana
Case	G-061-E	St. Mary's College of California

Ocean & Climate

Principal Investigator	I.D. No.	Institution
Steffen	O-309-L	University of Colorado, Boulder